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April 10, 2003

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Via Electronic Filing

Marlene H. Dortch, Secretary
Federal Communications Commission
Office of the Secretary
445 12th Street, SW
Washington, DC 20554

Re: Amendments to Parts 1, 2, 27 and 90 of the Commission's Rules to License Services in the 216-220 MHz . . . Government Transfer Bands, WT Docket No. 02-8; **Notice of Ex Parte Meeting**

Dear Ms. Dortch:

This is to advise you that on April 9, 2003 the undersigned and Randy Young of Keller and Heckman LLP, counsel for Data Flow Systems, Inc. ("DFS"), and Klaus Bender of UTC met with Scot Stone, Brian Marenco, Keith Fickner and Tim Maguire of the Federal Communications Commission's Wireless Telecommunications Bureau to discuss the above-referenced proceeding.

In particular, the purpose of the meeting was to discuss the channelization plan for the 216-220 MHz band. Although DFS had commented in this proceeding that 6.25 kHz channels were desirable, it was not until after the period for filing a Petition For Reconsideration had passed that DFS realized that the channelization plan adopted by the Commission in the Report and Order (R&O) did not accommodate existing users in the band. As described in the R&O, the channelization plan adopted was responsive to DFS' Comments in that it allocated the band in 6.25 kHz channels. The plan further provided that licensees may combine contiguous channels up to 50 kHz, and greater than 50 kHz upon a showing of adequate justification. *See* 47 C.F.R. §90.259 (a)(7) and (8). As subsequently revealed, in combining channels the center frequency of each larger channel is offset from the next smaller channel by one-half of the bandwidth of the next smaller channel. This effect was not discussed in comments filed in the proceeding nor in the Report and Order adopted by the Commission.

The foregoing is of substantial significance to DFS and its customers. DFS is the largest supplier of Supervisory Control and Data Acquisition (SCADA) telemetry systems operating in the 216-220 MHz band in the southeastern United States. Approximately 60 of these systems are

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operated by water utilities located from Florida to California. These systems have approximately 1500-2000 transmitters currently operating on 25 kHz channels. As Section 90.259 (a) (7) and (8) of the Commission's Rules currently are constituted and interpreted, these transmitters are not in conformity with the channelization plan. In addition, a number of university and other users have SCADA systems operating in the 216-220 MHz band which employ a frequency assignment scheme similar to that utilized in licensing the DFS systems.

Considering that no party advocated the channelization plan for aggregated 6.25 kHz assignments as adopted, and further considering that a number of users would be adversely affected by that plan, DFS respectfully requests that an alternative channelization plan be employed. At the *ex parte* meeting, counsel for DFS presented a channel plan proposed to the Land Mobile Communications Counsel's (LMCC) spectrum task force by Ron Hareseth, Director of Frequency Coordination for the International Association of Public-Safety Communications Officials (APCO), that both satisfies the 6.25 kHz channelization adopted in the R&O and the existing center frequency plan currently employed by incumbents in the band. This is set forth in the Attachment to this letter. Implementation of the channel plan presented would require modification of Sections 90.259(a)(7) and 90.259(a)(8) of the Commission's rules. This can be implemented by revising Section 90.259 (a)(7) and (8) to read as follows:

> (7) <u>Except as provided below</u>, assignable frequencies for 6.25 kHz channels occur in increments of 6.25 kHz from 217.00625 MHz to 219.99375 MHz.
>
> (8) Licensees may <u>be assigned</u> channels up to 50 kHz <u>bandwidth</u>, and more than 50 kHz only upon a showing of adequate justification. <u>For 12.5 kHz channels, increments of 12.5 kHz from 217.0125 MHz to 219.9875; for 25 kHz channels, increments of 25 kHz from 217.025 MHz to 219.975 MHz; and, for 50 kHz channels, increments of 50 kHz from 217.025 MHz to 219.975 MHz.</u> <u>For channels in excess of 50 kHz bandwidth, the licensee must designate the channelization plan in its application</u>.

Changed text is shown by underlining.

The Commission's attention to the foregoing is very much appreciated. Should any additional information be required, please contact the undersigned.

Very truly yours,

/s/ Martin W. Bercovici

Martin W. Bercovici
Attorney for Data Flow Systems, Inc.

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cc: Scot Stone, Deputy Chief, Policy and Rules Branch, Public Safety and Private Wireless Division, Wireless Telecommunications Bureau
Brian Marenco, Electrical Engineer, Public Safety and Private Wireless Division, Wireless Telecommunications Bureau
Keith Fickner, Attorney, Public Safety and Private Wireless Division, Wireless Telecommunications Bureau
Tim Maguire, Electrical Engineer, Public Safety and Private Wireless Division, Wireless Telecommunications Bureau

Attachment

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ATTACHMENT

April 9, 2003

In Regard to: Proceeding Number 02-8
Channelization of the 217 to 220 MHz. Band.
Comments by Donald B. Schultze
Data Flow Systems, Inc
605 N. John Rodes Blvd.
Melbourne, FL 32934-9105

Statement:
These comments concerning the re-channelization of the 217 to 220 MHz frequency band are offered to request that the plan submitted by APCO (Plan 217RH) showing 479 channels between 217.000 MHz and 219.99375 MHz be adopted.

The LMCC Version 1 Plan with 25 kHz channels beginning at 217.015625 would create extreme hardship and expense to many existing municipal, county and state entities using radio telemetry to monitor critical infrastructure.

History:
In about late 1994 Data Flow Systems was encouraged by one of the APCO volunteer coordinators, to investigate the 216 to 218 MHz. band. It should be understood that this advice was offered for several reasons. First, telemetry was secondary to voice in the 450 to 470 MHz. band. Secondly, the crowding of the 450 to 470 MHz band and the near impossibility of obtaining licenses in urban and metropolitan areas using one of the few telemetry channels available in the 154 or 173 MHz band made the 216 MHz to 218 MHz band look very attractive. Thirdly, this "new" band was limited to telemetry only, and as such was believed to be very safe from incursion by voice entities.

Thus, Data Flow Systems, (herein referred to as DFS), contacted the FCC directly by telephone and was informed that coordination was to be done by the applicant or his agent and that as there was no channelization in place, any frequency could be requested. In fact, the very first license (WPHW931 granted on 8/3/95) applied for by DFS to use for engineering purposes was requested for 216.820 MHz. Upon further reflection and additional research of the existing channels shown on the

ULS "Gen Men" page, it was decided to amend the application to request 216.825 MHz.

Further investigation showed that virtually every licensee listed in this band was for radio transmitters on 25 kHz centers beginning with 216.025, 216.050, 216.075, etc. In fact, when recently visited, the "ULS/Gen Men Report" page continues to show "0 Rows Retrieved" for nearly every frequency not on the previously cited 25 kHz channel centers. Virtually all of these "0 Rows Retrieved" appear only under the IBFS database, and for the most part, only channels on the standard 25 kHz centers appear on the ULS database. Thus, the natural conclusion is that the great majority of legally licensed entities, including colleges, and universities, geophysical companies, petroleum exploration companies, and power generating companies such as Southern California Edison and Commonwealth Edison all hold licenses on the even 25 kHz centers beginning with 217.000 MHz.

With this knowledge in hand and with the approval of the FCC, DFS began licensing their water and wastewater clients in the 216 to 218 MHz band as FX1 and FXO class licensees. Early in the year 2000, the FCC stopped granting fixed operational licenses (FXO) to clients in the 216 to 218 band based on the previously overlooked rule cited in 90.35(b) and 90.239. This was addressed in DFS petition RM-9882, and subsequently the rule was changed as part of Report and Order 02-152 to allow FB/FXO/MO classifications to be granted. It is important to note at this time that for the 5 years between 1995 and 2000, the FCC continued to grant licenses with the FXO classification. The FCC as well as DFS had overlooked or misunderstood the meaning of the 90.35 and 90.239 rulings.

When this was discovered it had the potential of stopping all expansion licensing of water and wastewater systems using this telemetry band. Most of the existing licensees would in the future require many additional radios at reservoirs, storage tanks, and pumping station sites. An in-person visit to 1270 Fairfield Road, by this writer, resulted in a temporary compromise while the petition RM-9882 was being reviewed.

That compromise, verbal and inferred, allowed that there was no reason why DFS could not continue to license new and existing systems as FB/MO as long as the antennas at the remote sites did not exceed 6 meters AGL. Further, when the petition was approved to allow licensing as Fixed Operational, these mobile sites would then be licensed as such. This was based on the fact that it was a telemetry band, and that such licensing (FB/MO) was permitted in the UHF bands.

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Over the course of the next year Petition RM-9882 seemed stalled and then it was discovered that the Re-allocation Act, with its many reviews of Report and Order 02-152, had rendered the petition moot. However, in accord with the acknowledgement of Gettysburg, DFS was forced to continue licensing new clients and providing existing clients with radios for their expanding systems and thus licensing them as FB/MO. This of course created many additional sites for the systems, to be licensed later as FXO. The result of all of this is that there are now approximately two to three thousand remote terminal units licensed to approximately 150 water and wastewater radio telemetry licensees across the country.

Many of these licensees are large counties with phenomenal future growth potential. Of course, this does not even come close to addressing the balance of other non-DFS licensees nationwide such as Exelon Generating Company, So. Cal Edison, Exxon, Western Geo, PG&E, State Universities of Boise Idaho, Pennsylvania, the University of Memphis Tennessee, and many, many, others that are licensed on the 25 kHz centers as proposed by APCO.

In addition to all of the above it should be noted that DFS is or was presently in the process of re-licensing all of its clients with licenses in the 216 to 217 portion of the spectrum. As this one megahertz of spectrum was given over to the hearing impaired by virtue of Report and Order 02-152 it is no longer judicious to have our clients continue to operate in this band or try to expand their systems by filing waivers for additional licenses. Thus our plan was to re-license them or modify their licenses to the 217 to 220 MHz band. This is not a technical problem as long as the band centers remain as they are with 25 kHz spacing beginning at 217.000 MHz. All of DFS client radios are frequency synthesized for 3 decimal accuracy and require only a few seconds on-site to change to the new frequency with the use of a laptop computer.

Technical Problems of Adopting the Non-APCO channel plan.

This writer cannot speak to the radios used by other entities but it is obvious that the channel plan put forth by APCO's Mr. Ron Haraseth requiring only 3 decimal point accuracy for all 25 kHz channel centers is by far the preferred plan. In that regard, the proposed 12.5 kHz channel centers require only 4 decimal point accuracy and the future 6.25 kHz channel spacing would require only 5 decimal point accuracy. The last zero in each of these is of course not relevant. To re-iterate, in Mr. Haraseth's plan the first 25 kHz channel would be 217.025 MHz, the first 12.5 kHz channel would be at 217.0125 MHz and the first 6.25 kHz channel would be at 217.00625 MHz.

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It appears to this writer that this makes abundantly more sense, especially in light of the fact that to incorporate a 3.125 kHz shift down to accommodate the original LMCC band plan would required replacing every radio presently operating in the field. It is a fact that in all DFS radios, retro-fitting new synthesized integrated circuit components would be required to meet the 6 decimal place requirement for all 12.5 and 25 kHz centers. This would also require revised circuit board layout and the re-licensing of every client now operating on the old 25 kHz channel centers. The cost just to DFS to do this is estimated to be at least 3 million dollars. This could well be a death blow to a small company with an annual gross income of only double that.

This does not even approach the cost that would be incurred by the 190 or so DFS' clients presently operating licensed systems to monitor expanding critical infrastructure in their communities. Waiver grants under the grandfather clause for these licensees desiring additional sites is not the answer as it would result in an odd mix of channel centers impossible to track and maintain coordination for, with regard to future geographical users.

Additionally, If forced to re-license to new channel centers, existing water and wastewater licensees will be required to run parallel systems during change-over to prevent shut down, or be required to maintain multiple crews to visually monitor and inspect each and every site daily to meet EPA standards. Should an un-reported pump failure occur in a sewer pumping station, a serious overflow resulting in possible health issues would become a definite possibility.

Conclusion:

It is the conclusion of this writer that the most reasonable approach to the channelization of the 217 to 220 MHz band it to adopt the plan set forth by Mr. Ron Haraseth of APCO. Thus allowing the existing 25 kHz frequency centers at 25 kHz intervals up from the beginning of the band at 217.000 MHz to remain as they are.

Submitted by:
Donald B. Schultze
Senior Consultant to Data Flow Systems, Inc
Radio Department.
4/9/03

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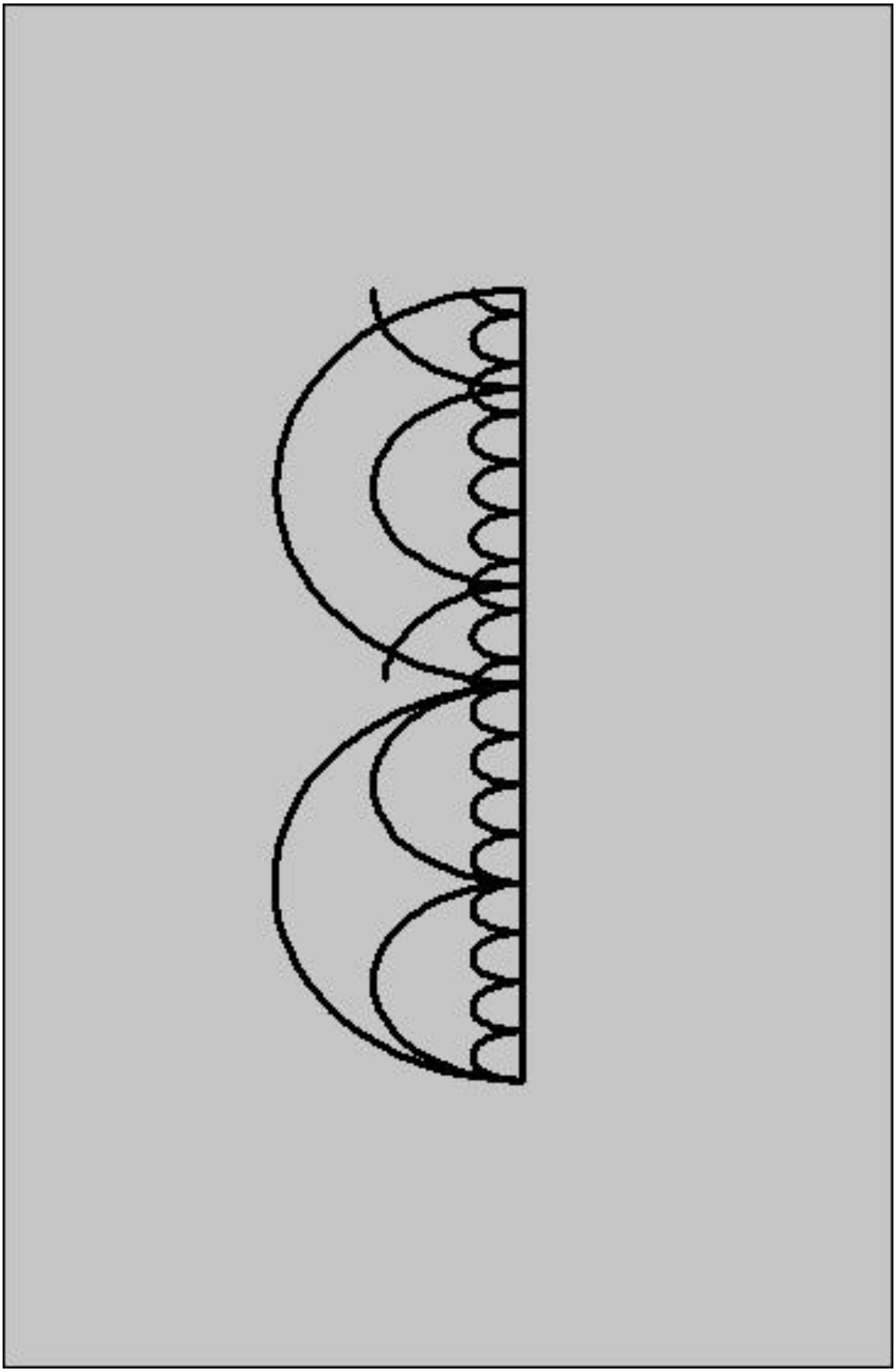

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479	6.25 kHz channels	
239	12.5 kHz channels	
119	25 kHz channels	
60	50 kHz channels	

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